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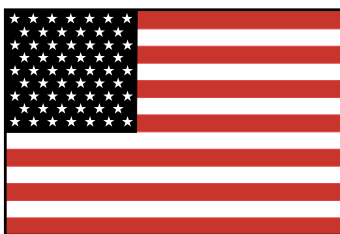
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AVIATION MAINTENANCE ALERTS



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**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590**

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Designee Standardization Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRPLANES

BEECH

Beech; Models Debonair, Bonanza, Baron and Travel Air; Inspection of Interior Door Handles; ATA 5200

The following article was submitted for publication by the FAA, Aircraft Certification Office (ACE-118W) located in Wichita, Kansas, and appears as it was received.

The FAA recently received a report from a Flight Standards District Office Airworthiness Inspector, along with four FAA Safety Recommendations. The report concerned the improper reinstallation of an interior door handle. This reinstallation error is the first that has been reported in the past three years. No accidents or incidents, due to incorrect installation of an interior door handle, have been reported.

If the door handles are not installed correctly, the cabin side door or utility door can be inadvertently opened from the inside without depressing the handle lock release button. The handle lock release button is designed to prevent unintentional opening of these doors. Airworthiness Directive (AD) 97-14-15 was written to correct improper reinstallation of the door handles; however, incorrect reinstallations still occur.

Airworthiness Directive 97-14-15 requires checking both the cabin side door handle and utility door handle from the interior of the airplane for proper locking. If the door handles do not lock, AD 97-14-15 requires reinstalling the door handles correctly to allow the lock to engage. This is to prevent unintentional opening of the cabin side door and the utility door from the interior of the airplane.

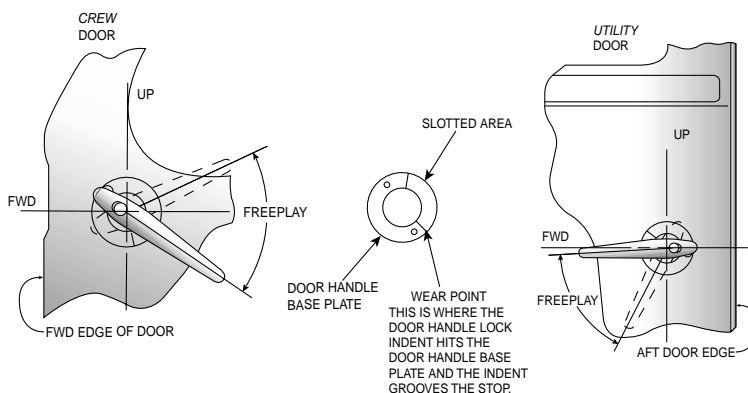
The Pilot's Operating Handbook provides corrective action due to "Unlatched Door in Flight."

The aircraft manufacturer has agreed to update Mandatory Service Bulletin (SB) No. 2693, adding additional aircraft to its effectivity. Some of the manufacturer's Shop and Maintenance Manuals have been revised, and other manuals will be revised at their next revision. Service Bulletin 2693 is included by reference in AD 97-14-15.

The submitter of this report recommended that after door handle removal, or as required by the manufacturer's technical data, that a check of both the cabin side door handle and the utility door handle be accomplished in accordance with the latest revision of SB 2693. The inspections of the door handle installations are to be accomplished by a certificated airframe mechanic or certificated pilot as required by Federal Aviation Regulations. Inspection of the interior door handle is now included as part of the 100-hour inspection in the shop manual for Models 55 and 58 aircraft. In accordance with AD 97-14-15, all airplanes must be inspected after 50 hours time-in-service (TIS). Regular maintenance should identify incorrectly installed door handles.

If the door handle opens the door when rotated, without depressing the handle's lock release button, prior to further flight, correct the door handle lock by removing the door handle, and reinstalling the door handle so that the lock release button locks the door in accordance with SB 2693.

If the door handle is locked and will only unlock by depressing the handle door lock release button, then no further action is necessary.



The illustrations show the correct installation of a cabin side door and a utility door lock.

Beech; Model E-18S; Poor Engine Performance; ATA 7400

After takeoff, the pilot noticed the right engine would not produce climb power. He returned to the departure airport and landed the aircraft safely.

The engines installed on this aircraft were Pratt & Whitney Model R-985. During an inspection, the technician found the engine ignition harness contained water. There was sufficient water present to, at least partially, ground out the ignition system and cause poor engine performance.

The submitter recommended inspecting the engine ignition system for water contamination especially when the aircraft is exposed to damp or rainy conditions.

Engine total time-1,243 hours.

Beech; Model C-23; Sundowner; Defective Fuel Selector Valve; ATA 2823

While complying with the requirements of Airworthiness Directive (AD) 75-01-04, the technician discovered the fuel selector valve did not function properly.

AD 75-01-04 references Beech Service Instructions (SI) 0364-289 RIII and 0622-289. These SIs contain the criteria for inspection, maintenance, and repair of the fuel selector valve.

A technician discovered it took 25 inch-pounds of torque value to turn the selector valve. This amount of torque far exceeds the 5 inch-pounds required for in the SIs. He removed and disassembled the fuel selector valve (P/N 169-920000-43) and (P/N 169-920000-165) which was also affected, and found the valve cone was severely scored. He replaced the defective fuel system components with a kit (listed in the SIs) supplied by Beech.

Part total time-3,296 hours.

Beech; Model C-23; Sundowner; Defective Flexible Plumbing; ATA Not Applicable

During a scheduled inspection, the technician discovered most of the flexible fluid lines installed in the aircraft were defective.

The defective lines were stiff, brittle, deteriorated, chafing, leaking, and generally unairworthy. Two of the brake lines were leaking and worn smooth on the outside where they were chafing hard against the firewall. Most of the flexible fluid lines were approximately 30 years old and were installed as original equipment on this aircraft. The technician replaced all the defective lines before approving the aircraft for return to service.

Defective flexible hoses have been the subject of many aviation difficulties. The submitter urged strict compliance with the manufacturer's recommended life limits for this type plumbing.

Part total time-30+ years.

Beech; Model F33A; Bonanza; Fuel Odor in the Cabin; ATA 2822

During a landing approach, the odor of fuel was detected in the cabin. After completion of the landing the pilot summoned maintenance personnel.

While investigating the source of the fuel odor, a technician discovered the engine driven fuel pump (Teledyne Continental P/N 646212-16A2) was leaking from the case drain. The fuel was atomized and the fumes were drawn into the aircraft cabin. The relatively short time this fuel pump was in service suggests it may have been defective when it was manufactured.

Part total time-434 hours.

Beech; Model A-36; Bonanza; Defective Landing Gear Actuator; ATA 3230

During a scheduled inspection, the technician conducted a landing gear retraction test and discovered a defect.

When the technician selected the gear "up" position, it retracted normally. However, when he selected the gear "down" position, the gear actuator (P/N 95-810017-B) jammed in the "up" position. The landing gear motor failed immediately. To overcome the resistance and extend the gear, he used the handcrank by applying several pounds of force.

The technician checked all the safety switches and the dynamic brake relay and found they were properly rigged and functioning correctly. He replaced the defective actuator with a new actuator.

Part total time-93 hours.

Beech; Model E-90; King Air; Aileron Structural Defect; ATA 5751

While complying with Beech Service Bulletin (SB) 57-3148, the technician discovered a severe structural defect.

The technician discovered a crack on the top skin of the aileron just outboard of the inboard hinge point. The crack was approximately 4.5 inches long and ran parallel to a skin lap joint. The crack was concealed by the paint and could not be found until the paint was removed.

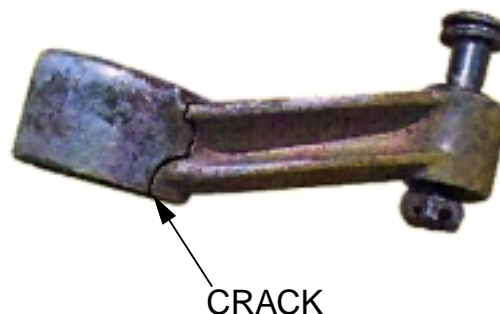
The submitter suggested that all operators of like aircraft comply with the data contained in SB 57-3148 as soon as possible.

Part total time-9,447 hours.

Beech; Model 95; Travel Air; Nose Gear Collapse; ATA 3230

The pilot reported the nose landing gear collapsed during a landing rollout.

While investigating this incident, a technician discovered the landing gear crank arm (P/N 35-825174) was cracked. (Refer to the illustration.) The gear crank arm attaches to the landing gear transmission, and the crack allowed it to expand and rotate on the transmission shaft splines.



The submitter speculated the weight of the nose gear applied pressure to the push-pull rod and caused the crank arm to rotate and release the nose gear. Metal fatigue is the most probable cause for this failure. He recommended removing the crank arm for a one-time inspection and using a 10X magnifying glass to check for evidence of cracking or slippage on the splines. The same landing gear arrangement is used on many other Beech aircraft models, and the cranks arm deserves your full attention during inspections and maintenance.

Part total time not reported.

Beech; Model 95-B55; Baron; Defective Horizontal Stabilizer; ATA 5552

The aircraft owner requested that a technician replace the damaged right elevator.

The technician ordered a “rebuilt” replacement elevator from a certified overhaul shop and installed it on the aircraft. When he moved the elevator from the “full-down” position to the “full-up” position, the horizontal stabilizer (P/N 95-620010-634) flexed upward approximately .4375 inch. Investigating further, he found the stabilizer (both spars) was “bent” down approximately 2 degrees at the center hinge point. He also found three patches on the stabilizer lower rear skin panel. The patches began approximately 12 inches from the outboard end. The patches were not recorded in the maintenance records.

Part total time-4,195 hours.

Beech; Model B200; King Air; Cabin Window Failure; ATA 5620

The pilot reported that after takeoff, the aircraft was placed in a climb attitude and the cabin was pressurized. He then heard a loud “bang” which seemed to come from the back of the cabin. The pilot executed the proper emergency procedures and landed the aircraft safely.

The technician discovered the small window (P/N 101-440042-1) aft of the cabin entry door had separated from the aircraft causing sudden depressurization of the cabin. He believed the window was installed when the aircraft was manufactured. As a precaution, he replaced the missing window and the similar window on the opposite side.

Aircraft total time-3,282 hours.

CESSNA

Cessna; Single Engine, Piston Powered Models

The following article was submitted for publication by the FAA, Aircraft Certification Office (ACE-118W) located in Wichita, Kansas, and appears as it was received.

The FAA has recently received information that some of the current production Cessna single engine piston powered airplanes are experiencing significant uneven fuel tank depletion rates between the LH and RH tank in normal operations. Failure to address and investigate this problem may be brought on to some extent by pilot complacency associated with a lack of confidence in the unreliable fuel gauging systems on older airplanes.

Recently, an airplane was inspected due to a fuel imbalance condition. It was found that fuel tank sealant was obstructing the right fuel tank vent line. This airplane had over 400 hours of operational time since new and prior to the inspections (for the fuel imbalance) was initiated. The discovery of fuel tank sealant in the fuel vent line on an airplane with over 400 operational hours since new indicates a lack of pilot awareness when considering the effect on fuel tank depletion rates.

This leads us to believe that there may be problems of a similar nature on other airplanes in the fleet. The report to the FAA indicated that the problem could not be duplicated on the ground but it was very obvious in flight.

It is recommended that Cessna single engine **SERVICE BULLETIN SEB 99-18** and the applicable maintenance manual be utilized to verify airworthiness of the fuel quantity indications. It is also recommended that pilots of all aircraft maintain an awareness of the fuel tank depletion rate of both tanks during normal cruise flight.

Aircraft total time not applicable.

Cessna; Models 170, 180, 185, 190, and 195; Tail-Wheeled Airplanes; Main Landing Gear Fatigue; ATA 3213

The following article was submitted for publication by the FAA, Aircraft Certification Office (ACE-115W) located in Wichita, Kansas, and appears as it was received.

The National Transportation Safety Board (NTSB) has issued recommendations that initial and repetitive non-destructive inspections be accomplished on main landing gear (MLG) spring struts of Cessna tail-wheeled airplanes. These recommendations emanated from an investigation of an accident in which the main gear spring failed at the upper axle attachment to the spring strut. This particular spring strut underwent major repair for previous damage prior to this accident.

FAA Service Difficulty Reports (SDR) indicate that failures can occur in the MLG spring struts at the axle attachment. Generally, such failures occur from corrosion pits in or at the axle attach points when the spring struts are modified for skis or oversized tires.

Failures have occurred in other areas of the spring strut due to corrosion that has penetrated the shot-peened layer that is 0.006 to 0.012 inches thick. Corrosion can occur where nicks and gouges have penetrated the protective paint coating, or where close fitting parts retain moisture. Wear between the spring and the landing gear support fittings can also penetrate the shot-peened layer if the wedges are allowed to get loose. Corrosion nicks or gouges can lead to failure during hard landings

Visual inspections of the spring strut should be performed every 50-hours and during annual inspections as required by the maintenance manuals. Nicks and gouges should be sanded lightly to remove corruptions, taking care not to exceed the depth of the shot-peened layer. Refinishing will then protect against corrosion. This is particularly important when the airplanes are modified for the installation of skis and oversized tires. Check for rust, nicks, gouges and other surface damage. Whenever repairs are made, the underside of the strut must be **shot-peened**. Alignment of the landing gears is difficult on these airplanes, but alignment must be done properly to minimize damage due to hard landings. Wheels can be aligned using shims designed for that purpose. Never attempt to align the wheels by bending the strut.

Cessna; Model 172L; Skyhawk; Flight Control Yoke Failure; ATA 2701

During a final approach for landing, the flight control yoke broke when the aircraft was at approximately 30 feet above ground level. This failure resulted in an aircraft accident.

An investigator discovered the control yoke failed just above the pivot point behind the control panel. The broken sections of the control yoke displayed evidence of severe corrosion at the fracture point and throughout the interior of the tube.

Cessna Service Bulletin (SB) 01-3, dated February 19, 2001, pertains to this subject; and all operators of like or similarly designed aircraft are urged to comply with the data contained therein as soon as possible.

Part total time-3,058 hours.

Cessna; Model 172N; Skyhawk; Main Landing Gear Failure; ATA 3213

During a landing, the right main landing gear failed and resulted in minor damage to the aircraft and no personal injuries.

A technician found a right gear leg spring attachment bolt (P/N S3461-108) broke and allowed the gear leg to rotate in the mount to approximately 180 degrees. While interviewing the pilot, the technician learned this damage may be attributed to exceptionally "hard braking." Apparently, the hard braking locked up the wheel assembly and the gear attachment bolt broke.

The submitter recommended replacing the main gear attachment bolts at 7,500 hours of time in service or sooner.

Part total time-9,601 hours.

Cessna; Model 172P; Skyhawk; Flight Control Linkage Damage; ATA 2730

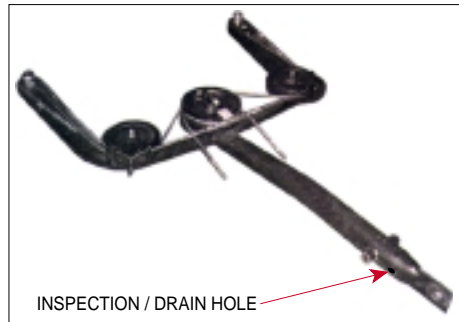
During an annual inspection and compliance with Cessna Service Bulletin SEB-01-3, the technician found the elevator control yoke damaged.

The elevator control yoke (P/N 0560014-5) was “full of rusty water,” and the interior of the tube assembly was severely corroded. Failure of the control yoke would result in complete loss of elevator control and possibly a catastrophic accident.

SEB-01-3 allows drilling a hole in the elevator control yoke tubing for recurring inspections and drainage. (Refer to the illustration.) When the inspection/drain hole was drilled in the control yoke tube, the “rusty water” poured out.

The submitter urged all operators of like aircraft to comply with SEB-01-3 and suggested that the data be used for an Airworthiness Directive.

Part total time-8,300 hours.



Cessna; Model 177RG; Cardinal; Nose Landing Gear Failure; ATA 3230

During the afterlanding rollout, the nose landing gear collapsed.

While removing the aircraft from the runway, the technician discovered that the lower down-lock link bolt (P/N NAS464-5A15) was missing. He stated that there is no means to “safety” the bolt except by using “Locktite” as specified in the manufacturer’s technician data.

The submitter recommended checking the bolt for condition and proper torque after each 200 hours of operation.

Part total time-5,311 hours.

Cessna; Model 177RG; Cardinal; Structural Corrosion; ATA 5341

To accommodate installation of a shoulder harness kit, the technician removed the cabin headliner and found severe structural corrosion.

The corrosion-damaged areas were the forward and aft upper spar caps and skins on both sides of the center wing section. He also discovered a crack in the left wing root rib and severe corrosion in the left and right wing root rib assemblies.

The submitter stated that if the proper inspection procedures had been followed during prior inspections, this damage would have been discovered before it resulted in this condition.

Part total time not reported.

Cessna; Model U206G; Stationair; Flight Control Interference; ATA 2701

After an accident, the pilot stated he experienced uncontrollable pitch control and limited aileron control immediately after takeoff. The flight control difficulties were believed to have been the cause of the accident.

While investigating the accident, an investigator discovered that an electrical (ribbon) cable assembly (P/N 1570308-1) had fouled the control column bearing assembly (universal). The electrical cable supplies electrical power for components mounted on the control yoke. The electrical cable was jammed between the rollers and the control tube. This condition prevented elevator control, except by applying maximum force to the control yoke, and severely limited aileron control.

The submitter owns and operates one additional like aircraft. He inspected the aircraft and found similar damage on the same flight control interference. He recommended that all operators of like or similarly designed aircraft immediately conduct an inspection for the possibility of the electrical cable interfering with proper operation of the flight control system. Also, the electrical cable should be secured in a manner to prevent future interference.

Part total time not reported.

Cessna; Model TU206G; Turbo Stationair; Wheel Brake Failure; ATA 3242

The pilot reported the left wheel brake failed while taxiing to the runway.

A technician inspected the brake system and found the master cylinder lower attachment brackets (P/Ns 0411549 and 0411550) were broken. This finding prompted him to inspect another like aircraft. The brackets on the other aircraft were badly bent.

The submitter recommended giving more attention to these brackets during scheduled inspections, even though the location makes inspection difficult. No cause for this defect was given; however, it is possible the damage was caused by excessive pressure applied to the brake pedals.

Part total time-3,359 hours.

Cessna; Model 421C; Golden Eagle; Hydraulic Pump Failure; ATA 2814

During a 25-hour engine oil change, the technician noticed oil venting out of the right engine overboard drain and the oil had a metallic "glimmer."

The technician removed the oil filter and cut it open to examine it further, but he did not find evidence of excessive metal contamination. He traced the source of the venting oil to the engine-driven hydraulic pump at the accessory drive case. He removed the pump and drive assembly and discovered the bearing (P/N 632330) in the drive adapter was seized to the drive shaft (P/N 632799) which allowed it to spin inside the housing. The seized bearing caused severe galling and deposited a significant amount of bronze and aluminum into the oil sump through the accessory case. The seized bearing also produced enough heat to melt the rear shaft seal, which allowed the oil to vent overboard.

Part total time-239 hours.

PIPER**Piper; Model PA 23-250; Aztec; Wing Tip Failure; ATA 5720**

During ground operations, the right wing tip fuel tank separated from the wing. The wing tip fuel tanks were installed by authority of Supplemental Type Certificate (STC) SA1480WE.

A technician found the fiberglass broken out around each of the fastener holes that attach it to the wing. It appeared the fasteners were properly tightened. The installation is designed with .25-inch edge distance in the fiberglass fairing for the attachment fasteners. He speculated this arrangement does not provide adequate structural strength for the imposed load.

In-flight separation of one or both wing tips in flight could cause loss of aircraft control and a catastrophic accident.

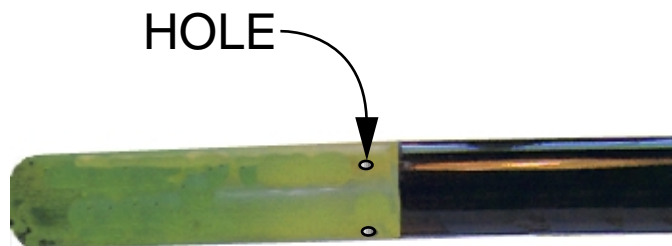
Part total time not reported.

Piper; Model PA 28-140; Cherokee; Defective New Part; ATA 2740

While complying with the requirements of Airworthiness Directive (AD) 70-26-04, Revision 2, a technician found the stabilator counterbalance arm tube was defective.

The technician ordered a new stabilator counterbalance arm tube (P/N 69623-004) from Piper. When the part arrived, he conducted a receiving inspection and found an extraneous hole in the tube. The hole was positioned at 90-degrees to the normal fastener hole and appeared to be filled with "slag." Also, "slag" was present on the interior of the tube. He speculated the "slag" was deposited when the part was fabricated.

The extra hole was located at a critical high stress point on the tube, and the submitter considered it to be structurally unairworthy. When received, a thick coat of black paint and zinc chromate covered the extra hole. After removing the paint, it appeared the extra hole had been filled with an unknown type of material. (Refer to the illustration.) The submitter suggested that technicians inspect all incoming parts for similar defects.



Part total time-0 hours.

Piper; PA 28-161; Warrior; Defective Control Cable; ATA 2740

During a scheduled inspection, the technician discovered a damaged flight control cable.

The left forward stabilator cable (P/N 62701-113) was severely frayed at the spar fairing and the rear spar pulley. The location of these defects makes them very difficult to see without removing the cable.

The submitter stated this was the third defective cable he has found in his fleet of aircraft. He suggested that technicians be vigilant for this type of defect and take steps necessary to ensure the cable is airworthy during scheduled inspections.

Part total time-6,559 hours.

Piper; Model PA 28-181; Archer; Nose Landing Gear Failure; ATA 3222

While practicing “touch-and-go” landings during a training flight, the nosewheel began to shimmy and the wheel separated from the aircraft.

During an investigation, the technician discovered the nosewheel lower strut tube (P/N 65280-00) was broken. He could not determine the exact cause for the failure, but he speculated it might be attributed to metal fatigue.

The submitter urged technicians to exercise due diligence to ensure the structural integrity of the nose landing gear assembly during inspections.

Part total time not reported.

Piper; Model PA 28R-201; Arrow; Stabilator Trim Defect; ATA 2731

The pilot reported that during flight, the stabilator trim system became jammed with the tab in the full “nose up” position. He was able to overcome the trim and made a safe landing.

A technician inspected the system and found that the stabilator trim cable jackscrew stop pin was not contacting the trim drum before the turnbuckle ferrule reached the aft pulley at Fuselage Station (FS) 228.3. The turnbuckle ferrule became wedged between the pulley and the cable guard which prevented cable movement. He rigged the trim system in accordance with the appropriate technical data and it operated properly.

The technician discovered another like aircraft in his fleet with the same condition. He recommended adding a “checklist” note to item 29 on the 100-hour/annual inspection that includes visually checking the stabilator trim cable turnbuckles to make sure it does not contact the aft pulleys.

Part total time since trim system rigging-290 hours.

Piper; Model PA 30; Twin Comanche; Landing Gear Failure; ATA 3230

After takeoff, the pilot selected the “up” position on the landing gear; but it did not retract. When he extended the landing gear during an approach, the left main gear did not indicate “down-and-locked.” He engaged the emergency extension handle, but it would not move. He assumed the gear was fully down and proceeded with the landing. When the aircraft weight was exerted on the main landing gear, the left main gear collapsed.

During an investigation, a technician discovered the left main gear safety (squat) switch (P/N 487-863) did not function properly. Electrical power was supplied to the switch; however, it would not flow through the switch for either the “up” or “down” gear travel. When the pilot selected the “gear-up” position, the gear moved just enough to disengage the “down-lock” and then would not go up or down.

Part total time-7,000 hours.

Piper; Model PA 31-350; Chieftain; Rudder Structural Damage; ATA 5540

During an annual inspection, the inspector discovered severe structural damage to the rudder.

The balance weight was loose even though the attachment bolts were tight. The rib (P/N 4044-000), used to attach the rudder balance weight, was broken. The upper section of the rib under the balance weight was severely damaged and broken. (Refer to the illustration.)

The submitter did not give a cause for this defect, but suggested the rudder balance weight be removed during annual inspections to allow inspection of the rib. This is a serious defect that could result in loss of aircraft control.

Part total time-3,692 hours.



RUDDER RIB



RUDDER BALANCE WEIGHT



RUDDER RIB, TOP VIEW

Piper; Model PA 31-350; Chieftain; Engine Power Surges; ATA 2822

After a flight, the pilot reported the right engine power was surging at high power settings. There were full-scale fuel flow fluctuations and the “low pressure” fuel warning light illuminated intermittently. The pilot landed the aircraft safely and requested maintenance action.

A technician found that the retaining clip, that secures the fuel pressure relief valve and spring assembly, was missing. The relief valve is installed in line with the low pressure fuel boost pump, and the missing clip and spring assembly allowed the plunger to move inside the housing. The plunger went to a position where it intermittently blocked the fuel pump output port.

This defect could have proved hazardous if it occurred during a critical stage of flight.

Part time since overhaul-290 hours.

Piper; Model PA 32R-301; Saratoga; Electrical System Defect; ATA 3340

The pilot reported that after turning on the landing light during a landing approach, he smelled a burning odor and saw smoke. He turned off the master switch and completed the landing safely.

The technician discovered the contacts inside the landing light switch (P/N 587-827) housing were worn and dirty which caused high resistance in the electrical circuit. The high electrical resistance caused overheating which melted the switch case. By turning off the master switch, the pilot averted further damage and a possible fire. If the pilot had not acted quickly, the circuit protection device would have tripped and removed electrical power from the circuit.

Part total time not reported.

Piper; Model PA 34-200; Seneca; Landing Gear Failure; ATA 3213

Following a landing incident, the pilot stated he could not get the right main landing gear to extend. All efforts to extend the gear failed, and he chose to land the aircraft with the nose and left main gear extended.

The technician discovered the right main gear was lodged in the wheel well. He found the torque links were separated at the center pivot which prevented gear extension. The torque link bolt (P/N 402-312) was broken (sheared) at the center pivot point. Both halves of the bolt with the nut and cotter pin remained in their installed positions in the lower torque link. The bolt halves were seized in the torque links, and there was no evidence of lubrication.

Part total time-1,330 hours.

RAYTHEON**Raytheon; Model 800; Hawker; Aileron Defects; ATA 5751**

Information for the following article was furnished by Mr. Jim Moore, who is an Airworthiness Inspector in the FAA Flight Standards District Office located in Houston, Texas.

During a scheduled inspection, the technician noticed what appeared to be some minor corrosion on the left aileron. The corrosion was in the area of the aileron balance weight.

In order to properly clean and treat the corrosion the technician removed the upper aileron skin. After removing the skin, he discovered a crack approximately 1.3 inch long in the outboard aileron attachment fitting. The corrosion and the crack were sufficient cause to replace the aileron.

This finding prompted the technician to remove the upper skin from the right aileron for inspection. He did not find cracks on the right aileron assembly; however, two angle brackets (P/Ns 25-8WG121-2 and 25-8WG125-2) were severely corroded and required replacement.

The owner operates a total of four like aircraft and after the discovery of these problems, he conducted an inspection of the ailerons (six) on the remaining three aircraft. The inspection resulted in the replacement of 1 aileron assembly because of a cracked outboard aileron attachment fitting and the replacement of 14 angle brackets due to severe corrosion. The defective angle brackets are located in the area of the counterweight. The part numbers of the replaced angle brackets are P/Ns 25-8WG121-3, 25-8WG120-1, 25-8WG125-3, 25-8WG123-2, 25-8WG121-4, 25-8WG125-4, 25-8WG123-4, 25-8WG127-4, and 25-8WG123-1.

The aircraft manufacturer's technical data requires a 12-year X-ray inspection of the ailerons. The four aircraft in this article had undergone the X-ray inspection and no defects were detected. The aircraft manufacturer has issued a Mandatory Service Bulletin (SB) 57-64-(3067), which addresses specific ailerons on certain series of 800A and 800B aircraft, that did not have drain holes drilled at the time of manufacture. However, SB 57-64-(3067) does not apply to all aircraft that do not have drain holes including the ones mentioned in this article. The area of concern is a small section on the outboard end of the aileron, and a drain hole was not in the original design. Maintenance personnel

are cautioned not to arbitrarily drill drain holes in this area without special authorization from the manufacturer or an FAA Designated Engineering Representative (DER). To do so may compromise the structural integrity of the aileron.

Part total time-4,504 hours.

TEMCO (GLOBESWIFT)

Temco (Globe Swift); Model GC-1B; Gear-up Landing; ATA 3260

While investigating a gear-up landing accident, an inspector discovered the electrical wires to the throttle micro switch were not properly connected.

The micro switch function to the gear warning light was inoperative and the pilot failed to ensure the landing gear was extended prior to landing. The spade wire lugs at the micro switch connection were extremely loose and disengaged at the slightest pressure. In addition, the inspector found the wire connections at the throttle micro switch were miswired. After properly wiring the micro switch, he discovered that it was necessary to pull the throttle aft very hard to get the gear warning light to extinguish.

Four factors contributed to the gear-up landing, the micro switch was miswired, and it was also misrigged, the wire connections were very poor, and the pilot did not ensure the landing gear was down and locked prior to landing.

Aircraft total time not reported.

AGRICULTURAL AIRCRAFT

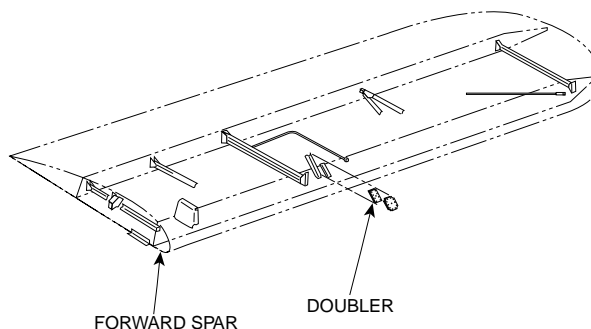
PIPER

Piper; Model PA 25-235; Pawnee; Wing Structure Damage; ATA 5711

While disassembling the left wing to replace a rib, a technician discovered severe structural corrosion.

The technician found the corrosion damage after drilling off a reinforcement plate/doubler. The corrosion was located between the doubler (P/N64188-00) and the rear face of the forward wing spar (P/N 64055-06). (Refer to the illustration.) The submitter suspects the corrosion was caused by moisture “wicking” in between the doubler and the spar.

The submitter suggested yearly treatment of the doubler-spar interface with a corrosion preventive product. This area is normally inspected only when the fabric covering is replaced.



Part total time not reported.

HELICOPTERS

BELL

Bell; Model 407; Excessive Vibrations; ATA 6510

During a flight, the pilot noticed an excessive vibration and started to return to the departure airport. However, the vibrations became more severe, and he landed the helicopter in a field.

During an investigation, a technician discovered that a tail rotor hanger bearing (P/N 407-340-339-103) was seized and had spun in the bearing housing. The bearing was the first hanger bearing aft and located just forward of the oil cooler blower. Continued operation could have produced catastrophic results.

Part total time-786 hours.

Bell; Model 407; Unusual Vibration; ATA 6520

After completing a 1.7-hour flight, the pilot noticed a shuddering vibration after rolling the twist grip (throttle) to idle. He reported the problem to maintenance personnel when the shutdown was complete.

A technician discovered there was movement between the tail rotor gearbox and the tail boom casting. Further inspection revealed that three gearbox stud nuts and one alignment pin were loose. Another mount stud was broken, and the "tail boom-to-gearbox" mount holes were elongated beyond acceptable limits. There was no apparent damage to the tail rotor assembly and, after replacing the defective parts, it was reinstalled. During a ground run, he noticed a strong vibration coming from the tail rotor at idle RPM. He replaced the tail rotor assembly, completed a ground run test, and discovered the vibration problem was solved.

The submitter concluded that the tail rotor became unbalanced, for an unknown reason, and caused a vibration that loosened the attachment stud nuts and exacerbated the vibration problem. It is interesting to note, that a tail rotor gearbox retention hardware check-and-balance inspection was completed 10.4 hours prior to this occurrence.

Part total time-43 hours.

EUROCOPTER

Eurocopter; Model AS-350-B2; Ecureuil; Missing Seal; ATA 6510

During a scheduled inspection, the technician discovered that a tail rotor drive shaft seal was missing.

The seal (P/N 350A-1063-20) is self-adhesive, and it appeared it was never installed. The seal is normally installed to prevent dissimilar metal corrosion on the tail rotor drive shaft hanger support and the hanger bearings. The technician checked the remaining three like helicopters in his fleet and discovered none of them had the seal.

The submitter suggested that all operators of like helicopters conduct an inspection to determine if this seal is installed on their aircraft.

Helicopter total time-2,672 hours.

HILLER**Hiller; Model UH-12E; Control Rotor Cuff Assembly Failure; ATA 2700**

This is a followup to an article that was published in the January 2000, edition of this publication. The article updates the findings of the National Transportation Safety Board (NTSB). The original article follows.

While investigating an accident, the investigators found the rotor control cuff failed.

The cuff (P/N 36124) split at the inboard bolt hole and the outboard section; along with the control rotor tube assembly which separated from the helicopter. This resulted in loss of helicopter control. The evidence indicated that this defect began as a crack at the inboard cuff bolt hole and progressed to the point of ultimate failure. After the investigators recovered both halves of the control rotor cuff, they sent them to the National Transportation Safety Board (NTSB) laboratory for analysis.

Part total time-2,845 hours.

The NTSB laboratory analysis yielded the following conclusions.

The NTSB laboratory analysis concluded that the failure of the rotor cuff was caused by fatigue. The fracture features are indicative of fatigue emanating from the cuff hole at the head side of the inboard bolt. The fracture surfaces were partially obscured by heavy black deposits adjacent to the hole. The deposits appeared typical of aluminum fretting products. When the blade cuff was received for examination it was loose on the spar and displayed longitudinal movement of approximately .02 to .05-inch.

The NTSB accident report (SEA00TA013) determined the probable cause of this accident was inadequate inspection of the control rotor cuff by a company mechanic and subsequent fatigue fracture of the cuff, resulting in an inflight separation of the control rotor blade. Factors contributing to the accident were: inadequate quality control during manufacture; insufficiently defined manufacturer's inspection and repair procedures; inadequate FAA approval of the manufacturer's inspection and repair procedures; power lines in the helicopter's emergency flight path; and reduced aircraft controllability following the control rotor separation.

McDONNELL DOUGLAS**McDonnell Douglas; Model 369E; Main Rotor Coating Separation; ATA 6300**

A technician, who maintains a fleet of like helicopters for a metropolitan police department, forwarded two reports concerning separation of the main rotor static mast coating.

As the coating on the inner diameter of the main rotor static mast separates, chips fall into the main rotor transmission and cause contamination. The submitter could not determine a cause for the separation of the coating material. At this time, the manufacturer's representatives have not come to a conclusion or offered a repair scheme.

Helicopter total time-5,200 hours.

SIKORSKY

Sikorsky (Erickson); Model S-64F; Skycrane; Rotor Head Hinge Pin Cracks; ATA 6220

A technician reported, "The main rotor head hinge pins (P/N 65103-11020-102) crack from the damper nut safety hole approximately 15 percent of the time. Typically, the cracks travel outboard to the edge of the hinge pin."

The technician found one hinge pin cracked inboard, through the threads, into the thread relief, and around the hinge pin. The crack traveled approximately .6 inch around the thread relief.

Technicians should be aware of the possibility of this type of crack developing and take the necessary precautions.

Part total time unknown.

GLIDERS

PZL-BIELSKO

PZL; Model SZD-503; Flight Control Defect; ATA 5540

While preparing for a scheduled inspection, the pilot/owner stated he had experienced rudder flutter and sticking.

The inspector discovered the rudder control pulley bracket was cracked at the location of the attachment bolts. The submitter speculated lack of varnish on the bracket and shrinkage of the material caused the crack.

The submitter recommended that operators of like aircraft conduct inspections for similar defects.

Part total time not reported.

POWERPLANTS AND PROPELLERS

HARTZELL

Hartzell; Model HC-C2YL-2CUF; Propeller Feathering Defect; ATA 6123

This propeller is installed on a Textron Lycoming Model O-320-A3B engine used on a Piper Model PA 23-150 aircraft.

During a training flight, the left propeller would not come completely out of feather; therefore, the engine could only develop 1,500 RPM. The pilot landed the aircraft safely. When he shutdown the engine, the propeller went back into feather regardless of the propeller control position. Maintenance personnel were summoned and asked to repair the problem.

A technician disassembled the propeller and discovered one of the feather latch weights was broken. The broken halves of the latch weight were examined under magnification. The fracture area appeared to be very granular, and corrosion was present in some of the voids between the metal grains.

Part total time-1,059 hours.

Hartzell; Model PHC-C3YF-2UF; Broken Spring; ATA 6123

This propeller was installed on a Beech Model 95-B55 aircraft and was removed and sent to an FAA-certified repair station for overhaul.

When the shop technician disassembled the propeller for overhaul, he discovered the feathering spring (P/N B1594-1) was broken. The fracture surfaces of the broken spring displayed evidence that the failure was caused by a pre-existing crack that had occurred some time ago. The spring was broken between the first and second coil and evidence of corrosion was present. (Refer to the illustration.)



The submitter speculated the crack originated from the corrosion and progressed over time to the failure point.

Part total time-4,242 hours. Part time since overhaul-960 hours.

TEXTONLYCOMING

Textron Lycoming; Model O-235-L2C; Poor Engine Performance; ATA 8550

This engine was installed in a Cessna Model 152 aircraft.

After returning from a flight, the pilot reported the engine ran very poorly.

A technician discovered the induction tube, that is attached to the oil sump, was loose and caused the poor engine performance. After he replaced the oil sump, the problem was corrected. He stated this was the fifth like engine he has found with this defect.

Engine time since overhaul-2,000 hours.

Textron Lycoming; Model O-360; Broken Ring; ATA 8530

This engine was installed in a Cessna Model 172RG aircraft.

The aircraft owner complained that the engine was consuming an excessive quantity of oil and asked a technician to find and correct the problem.

The technician discovered that a small piece of the number 3 cylinder piston (P/N AL75089) oil control ring was broken. The oil control ring land was elongated, presumably due to the movement of the piece of the ring that was floating around in the ring gap.

The submitter believes the broken ring and elongated land allowed the excessive oil consumption. He speculated the damage was caused by “shock cooling” that occurred when the engine power was reduced at altitude while making a descent.

Part total time-1,111 hours.

Textron Lycoming; Model TIO-540-S1AD; Oil Leak; ATA 8500

This engine was installed in a Piper Model PA 32-301T aircraft.

During an annual inspection, the technician noticed oil on the engine case.

After removing the propeller governor and the engine baffling, the technician found oil coming from a small crack in the crankcase. The crack was located forward of the number 2 cylinder upper forward hold-down nut.

This engine has not been overhauled since it was manufactured, and the submitter speculated this defect was caused by age. He urged all owners, operators, and maintenance technicians to inspect this area for cracks at every opportunity.

Engine total time-2,078 hours.

AIRNOTES

ALL AIRWORTHINESS DIRECTIVES ARE ON THE WEB

The FAA, Aircraft Certification and Flight Standards Services are pleased to announce that all Airworthiness Directives (ADs) are now available on the Internet in the Regulatory and Guidance Library (RGL).

The Internet address is: <<http://www.airweb.faa.gov/rgl>>

In addition, you can find the ADs from the FAA homepage by clicking on “FAA Organizations” and then “Aircraft Certification Service.”

This improvement should be of great benefit to aircraft owners, operators, technicians, pilots, and other interested persons.

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In the past, we furnished the GPO subscription form in this publication. The older issues which contain the subscription form, may not have current pricing information. Since GPO controls price increases, contact GPO for current subscription information.

ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the AFS-600 Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is:

<http://av-info.faa.gov/isdr/>

When the page opens, select "M or D Submission Form" and, when complete, use the "Add Service Difficulty Report" button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

SERVICE DIFFICULTY PROGRAM DATA ON THE INTERNET

The FAA, Service Difficulty Reporting (SDR) Program is managed by the Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The information supplied to the FAA in the form of Malfunction or Defect Reports (M or D), Service Difficulty Reports (SDR), or by other means, is entered into the SDR data base. This information has been available to the public through individual written request. This method has provided the aviation public with an invaluable source of data for research or finding specific problems and trends.

The Service Difficulty Reporting Program relies on the support of the aviation public to maintain the high quality of data. AFS-620 has included the SDR data on an Internet web site, which is now available to the public. Using the web site will expedite the availability of information. The Internet web site address is: <http://av-info.faa.gov>

On this web site, select "Aircraft" along the top of the page, next select "Service Difficulty Reporting," and then select "Query SDR Data."

This web site is now active; however, it is still under development and improvements are being made. We ask for your patience, ideas, and suggestions. If you find the web site useful, let us know. Also, spread the word about the availability of information on the web site. To offer comments or suggestions, you may

contact the web master or call Tom Marcotte at (405) 954-4391.

The data base now includes a more comprehensive search/query tool with provisions for printing reports or downloading data.

Please remember that the information contained in the SDR data base is only as good as the input we receive from the aviation public in the form of SDR and M or D reports. Also, the data used in production of this publication is derived from the SDR data base. In that regard, we solicit and encourage your participation and input of information.

This publication, as well as many other publications, was previously included on the "FedWorld" internet site. The FedWorld site was terminated on April 15, 2000. The data previously listed there is presently being transferred to the "av-info" web site.

ADDRESS CHANGES

In the past, the Designee Standardization Branch (AFS-640) maintained the mailing list for this publication. Now, the Government Printing Office (GPO) sells this publication and maintains the mailing list; therefore, please send your address change to: U.S. Government Printing Office, **ATTN: SSOM, ALERT-2G**, 710 N. Capital Street N. W., Washington, DC 20402

You may also send your address change to GPO via FAX at: (202) 512-2168. If you FAX your address change, please address it to the attention of: **SSOM, ALERT-2G**. Whether you mail or FAX your address change, please include a copy of your old address label, and write your new address clearly.

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

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You can access current and back issues of this publication from the internet at: <http://afs600.faa.gov>

When the page opens, select "AFS-640" and then "Alerts" from the drop-down menu. The monthly issues of the Alerts are available back to July 1996, with the most recent edition appearing first.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between June 16, 2001, and July 12, 2001, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION

Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFTMAKE ACFTMODEL REMARKS	ENG MAKE ENG MODEL	COMPMAKE COMPMODEL	PARTNAME PART NUMBER	PART CONDITION PART LOCATION	DIFF-DATE OPER CTRL NO.	T'TIME TSO
BEECH 1900C	PWA PT6A65B	ENGINE	FAILED R GEARBOX		04/04/2001 CA010515014	25153 1475
(CAN) ENGINE SPOOL DOWN NOTED TO BE VERY SHORT HIGH RESISTANCE TO TURNING REDUCTION GEAR BOX THROUGH PROP BLADES AND INTERNAL RUBBING DETECTED INDICATING INTERNAL PROBLEMS. - CAUSE TO BE DETERMINED UPON ENGINE TEAR DOWN. - ENGINE WAS INVOLVED IN A PROP STRIKE 10 DAYS (64 FLIGHT HOURS) EARLIER AND HAD JUST BEEN RETURNED TO REGULAR MAINTENANCE INTERVALS AFTER COMPLETING THE REQUIRED INCREASED INSPECTIONS REQUIRED BY THE ENGINE MANUFACTURER. - ENGINE TEAR DOWN SHOULD INDICATE THAT						
BEECH C23		LINE	LEAKING BRAKE SYS		05/11/2001 20010601CW009	
MOST OF THE FLEXIBLE FLUID LINES IN THIS AIRCRAFT WERE FOUND TO BE STIFF. TWO OF THE BRAKE LINES WERE FOUND TO BE CHAFFING ON THE FORWARD FIREWALL AREA AND WERE WORN SMOOTH ON THE OUTSIDE. BOTH OF THESE WERE LEAKING THROUGH THE HOSE. ALL OF THE FLEXIBLE FLUID LINES IN THE BRAKE SYSTEM WERE REPLACED. THE FLEXIBLE FLUID LINES BETWEEN THE FUEL TANKS AND SELECTOR VALVE WERE ALSO REPLACED. MOST OF THESE APPEARED TO BE ORIGINAL AND WERE ABOUT 30 YEARS OLD. THE FLEXIBLE LINES IN THE ENGINE COMPARTMENT ARE BEING REPLACED ALONG WITH ENGINE MAINTENANCE AT ANOTHER LOCATION.						
BELL 205A1	LYC T5313B	HONEYWELL T5313B	BEARING 130000405	BROKEN BEARING	06/17/2001 CA010703034	1413
(CAN) ENGINE CHIP LT CAME ON. METAL CHIPS WERE FOUND						
BELL 206B	ALLSN 250C20B		TUBE	CHAFED TRANSMISSION	03/27/2001 CA010515009	
(CAN) TUBE ASSY (XMSN) FOUND CHAFED IN VERTICAL TUNNEL. ONE OF THE CONTROL TUBES CHAFED THE TUBE WITH EVERY CONTROLLED INPUT. TUBE ASSY REPLACED.						
BELL 206B	ALLSN 250C20B		BEARING	CRACKED T/R DRIVESHAFT	03/27/2001 CA010515010	
(CAN) 2 TAIL ROTOR DRIVESHAFT BEARINGS HAVE GREASE HOUSINGS CRACKED. BOTH BEARINGS ROUGH, EXCESSIVE GREASE SQUEEZE OUT. BOTH BEARINGS REPLACED.						
BELL 212	PWA PT6T3		CROSS TUBE	BROKEN MLG	05/01/2001 CA010522025	
(CAN) HELICOPTER WAS ON A HELI SKIING JOB. THE JOB DESCRIPTION IS LOW HOURS BUT LOTS OF LANDINGS IN SNOW. THE PILOT HAD A RATHER ABRUPT LANDING ON ONE OF THE LANDING SITES (NOT HARD BUT NOT SMOOTH). AT THE NEXT LANDING THE PILOT HEARD A LOUD BANG AND IT WAS NOTED THAT THE SKID TUBE ON THE LEFT SIDE OF THE AIRCRAFT WAS NO LONGER PARALLEL WITH THE AIRCRAFT, THE SKID TUBE WAS DETACHED FROM THE REAR CROSS TUBE BUT STILL ATTACHED TO THE FRONT CROSS TUBE, A CRIB OR SUPPORT WAS BUILT TO ALLOW THE AIRCRAFT TO LAND AND SHUT DOWN WITH NO INCIDENT. THE HELICOPTER HAD BROKEN THE LOW AFT CROSS TUBE NEAR THE SKID TUBE ATTACHMENT SADDLE ON THE LEFT SIDE.						
BELL 407			BEARING 407340339103	SEIZED TAIL ROTOR	05/09/2001 20010601CW004	786
PILOT FELT EXCESSIVE VIBRATION AND HEADED BACK TO BASE, AFTER SHORT PERIOD VIBRATION INCREASED, PILOT LANDED IN FIELD. FOUND TAIL ROTOR HANGER BEARING SEIZED AND SPUN IN BEARING HOUSING. THE BEARING THAT FAILED IS THE FIRST BEARING AFT LOCATED JUST FORWARD OF OIL COOLER BLOWER.						
BELL 47G4A	LYC VO540B1B3	BELL 64A	HUB	CRACKED MAIN ROTOR	01/15/2001 CA010511027	1543 192
(CAN) FOUND CRACKED IN THREADED AREA AFTER EDDY CURRENT INSPECTION WHILE CARRYING OUT AD,						

BLANCA	LYC	HINGE	FAILED	05/11/2001	
1731A	IO540*	191965910	ALT AIR DOOR	20010604CW016	
PILOT DID NOT REPORT ANY ABNORMAL OPERATION. AIR BOX WAS REMOVED AT ANNUAL INSPECTION FOR SERVICING AND ALTERNATE AIR DOOR FELL ON FLOOR. ALL HINGE PIN SEGMENTS HAD FAILED.					
BOLKMS	ALLSN	SOLENOID	FAILED	04/19/2001	
BO105C	250C20B		HYD SYSTEM	CA010515008	
(CAN) HYD BLOCK LIGHT CAME ON IN FLIGHT. PILOT RETURNED TO BASE AND CALLED OUT RESCUE CREW. LANDED WITHOUT DIFFICULTY. SOLENOID VALVE REPLACED AND AIRCRAFT RETURNED TO SERVICE ON APRIL 20. AIRCRAFT TEST FLOWN FOR 30 MINUTES AND NO FURTHER LIGHT REPORTS.					
CESSNA		SPRING	BROKEN	05/14/2001	300
170B		0542106	TAIL WHEEL	20010604CW006	
TAIL WHEEL SPRING BROKE AT AN EXISTING CRACK. TAIL WHEEL THEN DAMAGED THE LOWER SKINS OF THE RUDDER.					
CESSNA		BUSHING	DAMAGED	05/02/2001	
172		S100442A	RUDDER HINGE	20010605CW015	
NEW RUDDER HINGE HOT BUSHING, MISSING LARGE CHUNK OUT OF BOTTOM END OF BUSHING.					
CESSNA	CONT	CYLINDER	SEPARATED	05/08/2001	
172	O300B		NR 1	CA010522019	2103
(CAN) NR 1 CYLINDER BARREL BROKE LEAVING CYLINDER BAS ATTACHED TO CRANKCASE AND CYLINDER ATACHED BY EXHAUST AND INTAKE. APPROXIMATELY 1" OF CYLINDER IS STILL ATTACHED TO CRANKCASE. PISTON AND CONNECTING ROD ARE DESTROYED. BOTH CASE HAVES AND REAR CASE IS DESTROYED. A SUCCESSFUL FORCED LANDING WAS MADE AT PRINCE GEORGE AIRPORT.					
CESSNA		YOKE	CORRODED	05/17/2001	8300
172P		05600145	COCKPIT	20010606CW001	
WHILE PERFORMING ANNUAL INSPECTION AND SB, FOUND ELEVATOR CONTROL YOKE CONTAINED RUSTY WATER, CAUSING EXCESSIVE CORROSION. IF THIS PART FAILS COMPLETE LOSS OF ELEVATOR CONTROL RESULTS. SB PERMITS DRILLING HOLE FOR RECURRING INSPECTION. SUGGEST SB SEB-01-3 BE MADE AN AD NOTE.					
CESSNA	LYC	RISER	CRACKED	04/05/2001	
172Q	O360*	17540071	EXHAUST SYS	20010604CW002	
NR 3 EXHAUST RISER CRACKED AT FLANGE. NOTED: COMMON FAILURE, PER EXHAUST REPAIR STATION.					
CESSNA		TACHOMETER	OUT OF	04/26/2001	
172R		S33291	COCKPIT	20010605CW016	
NEW TACHOMETERS OUT OF MFG 50 RPM TOLERANCES. DIGITAL CHECKS OF FINE ADDITIONAL 172R AND 172S AIRCRAFT SHOWED TACH TO READ WITHIN PLUS OR MINUS 50 RPM. DISCOVERED WHEN DOING AD.					
CESSNA	LYC	PISTON RING	BROKEN	05/15/2001	1110
172RG	O360*	AL75089	NR 3 CYLINDER	20010606CW002	
AIRCRAFT WAS CONSUMING A LARGE QUANTITY OF OIL. UPON INSPECTION FOUND THE NR 3 CYLINDER OIL CONTROL RING LAND ELONGATED DUE TO A SMALL PIECE OF RING WHICH HAD BROKEN OFF AND BEGAN TO FLUTTER. PROBABLE CAUSE OF SHOCK COOLING.					
CESSNA		RIB	CRACKED	05/09/2001	
177RG			LT WING	20010604CW001	
DURING THE INSTALLATION OF SHOULDER HARNESS KITS, THE HEADLINER WAS REMOVED. CORROSION ON CARRY THRU SPAR FORE AND AFT TOP SPAR CAPS AND SKIN WAS NOTICED. CORROSION WAS ALSO PRESENT AT LEFT AND RIGHT ROOT RIBS. LEFT ROOT RIB HAD SMALL CRACK. NO FURTHER ACTION TAKEN.					
CESSNA		BOLT	MISSING	05/30/2001	5311
177RG		NAS4645A15	NLG	20010530CW001	
NOSE GEAR COLLAPSED ON LANDING ROLL OUT, DOWN LOCK LINK BOLT(LOWER) WAS FOUND MISSING PN NAS4645A15, NO MEANS OF SAFETY MAY BE USED WITH THIS DESIGN, ONLY LOCTITE CV SEALANT AS STATED IN SERVICE MANUAL. PART HAD 5311 HOURS.					
CESSNA	CONT	ALTERNATOR	FAILED	05/16/2001	
337G	IO360G	DOFF10300E	FWD ENGINE	20010605CW017	31
OWNER OF THIS AIRCRAFT EXPERIENCED FWD ENGINE ALTERNATOR FAILURE (AS INDICATOR BY FAILURE LIGHT) DURING FLIGHT. TECHNICIAN AND OWNER REMOVED ALTERNATOR FROM ENGINE AND DISCOVERED THE DRIVE SHAFT SHEARED. THE GEAR RETAINING BOLT HAD RUBBED INTERNALLY AND BUSTED A PIECE OF THE COTTER PIN OFF, WHICH WAS FOUND ON THE MAGNETIC OIL DRAIN PLUG. THE DRIVE GEAR ALSO DISPLAYED SIGNS OF WEAR. THE ALTERNATOR SHAFT FAILURE APPEARS TO BE A MATERIAL DEFECT.					
CESSNA	CONT	CONT	PISTON	06/18/2001	
337G	IO360G	IO360	PISTON	CA010627062	1350
(CAN) ON A GROUND RUN-UP PRIOR TO A SCHEDULED INSP					
CESSNA		CIRCUIT BOARD	SHORTED	04/25/2001	704
TU206F		15703072	ELEV TRIMS SYSTEM	20010531CW003	
SHORT CIRCUIT RESULTED IN BURNED SPOT ON BOARD AND OPEN CIRCUIT. CAUSE APPEARS TO HAVE RESULTED FROM ELECTRICAL OVERLOAD TO CONNECTION. CAUSE FOR OVERLOAD-UNKNOWN.					
CESSNA	CONT	PLACARD	REVERSED	05/14/2001	
U206F	IO520F		COCKPIT	CA010523006	
(CAN) THE DECAL ON THE ELEVATOR TRIM WHEEL APPEARS TO HAVE BEEN FABRICATED. WHEN IT WAS INSTALLED, THE "NOSE UP" AND "NOSE DOWN" DECALS WERE REVERSED. WHEN THE PILOT THOUGHT HE WAS TRIMMING THE NOSE DOWN, HE WAS ACTUALLY TRIMMING IT UP. THE LOCATION OF THE DECALS WAS CORRECTED.					
CNDAIR	GE	PPG	WINDSHIELD	06/19/2001	5572
CL6002B19	CF343B1	NP1393219	WINDSHIELD	CA010626046	
(CAN) PASSING THROUGH 8,000 FT. THE WINDSHIELD DEV					
CNDAIR	GE	GE	CARBON SEAL	06/27/2001	
CL6002B19	CF343B1	CF343B1	CARBON SEAL	CA010704015	(CAN)
BOMBARDIER AEEROSPACE HAS JUST RECEIVED A RE					
CNDAIR	GE	ACTUATOR	FAILED	04/21/2001	2683
CL604	CF343B1		BLEED AIR SYSTEM	CA010511026	
(CAN) OVERHEAT OF THE ACCUMULATOR, THE ELECTRIC WIING, LOWER ENGINE FAIRING AND THE LOWER CENTRAL PART OF THE NACELLE DUE TO DE-COUPLING OF THE COMPRESSED AIR INTAKE AND THE 10TH STAGE HOT AIR PORTION. THIS COUPLING IS IN A HARD TO READ AREA AND IS HARD TO TIGHT AND HAS NO RETAINING WIRE. THIS IS THE 3RD INCIDENT THAT I NOTICE OF THIS SORT.					
DHAV	PWA	RHEOSTAT	OVERHEATED	04/10/2001	9250
DHC6300	PT6A27		COCKPIT	CA010515005	9250
(CAN) OXYGEN REGULATOR IN COPILOT POSITION WAS REPLACED WITH OVERHAULED UNIT. INTERNAL LIGHTING WIRES FOR THIS UNIT WERE CONNECTED IMPROPERLY (POLARITY REVERSED). AS A RESULT THE RHEOSTAT WHICH CONTROLS LIGHT INTENSITY FOR THE COPILOTS INSTRUMENT LIGHTING WAS SHORTED TO GROUND. THE 5 AMP CIRCUIT BREAKER THAT PROTECTS THIS LIGHTING RHEOSTAT DID NOT POP AND CAUSED THIS RHEOSTAT (RATED AT 2.7 AMPS MAX .7 MIN.) TO OVERHEAT AND CAUSE SOME SMOKE IN THE COCKPIT AREA.					

DHAV DHC8102 (CAN) BOMBARDIER AEROSPACE REGIONAL AIRCRAFT HAS J	PWA PW120	TRIPLEX 0780306	WINDSHIELD	CRACKED WINDSHIELD	03/22/2001 CA010628064	13748
DHAV DHC8102 (CAN) THE FLIGHT CREW REPORTED ILLUMINATION OF THE NR 2 A/C. GENERATOR LIGHT ON TAKEOFF. AN UNSCHEDULED LANDING WAS ACCOMPLISHED AND THE GENERATOR WAS REPLACED. OIL WAS FOUND IN THE MAIN ELECTRICAL CONNECTOR OF THE UNSERVICEABLE GENERATOR. THIS UNIT HAD BEEN REPAIRED 161 HOURS PREVIOUS TO THIS OCCURRENCE.	PWA PW120A		CONNECTOR	LEAKING NR 2 GENERATOR	05/06/2001 CA010522013	6070 161
DHAV DHC8311 (CAN) THE FLIGHT CREW REPORTED THAT THE ROLL CONTROL FELT HEAVIER THAN STANDARD FOR TYPE. MAINTENANCE INVESTIGATION REVEALED THAT THE R/H UPPER AILERON CONTROL CABLE WAS FRAYED AT THE STEEL PULLEY, WING STATION YW 256.0, JUST OUTBOARD OF THE ENGINE NACELLE. THE CABLE WAS REPLACED AND THE AIRCRAFT WAS RETURNED TO SERVICE. TTAF 22,429 HOURS, TCAF 33,043.	PWA PW123		CONTROL	FRAYED AILERON	04/27/2001 CA010522010	22429
GRUMAV TBM3EAIRTRD (CAN) SHORTLY AFTER TAKEOFF THE PILOT DETECTED THE SMELL OF SMOKE IN THE COCKPIT. HE ELECTED TO RETURN TO FREDERICTON AIRPORT AND DID A NORDO APPROACH AND LANDED SAFELY. MAINTENANCE FOUND THAT THE POWERPACK RESISTOR HAD BURNED AND THEREBY CUTOFF NR 1 RADIO. THE BURNED MP-10 POWER PACK RESISTOR WAS CAUSED BY A FAILED VOLTAGE REGULATOR (BENDIX P/N TYPE 1589) WHICH RESULTED IN AN	WRIGHT R260020	NARCO 661	POWERPACK	BURNED VHF COMM	04/12/2001 CA010515013	
GULSTM 690A CORROSION IN CLAMPS AND BEARING RACES, REJECTED ALL 3 CLAMPS AND 1 RACE.			CLAMP HCB37N5	CORRODED PROPELLER	03/19/2001 20010604CW015	560 373
HILLER UH12E DOUBLER DELAMINATION NO SIGNS OF CORROSION OR IMPACT WHICH MIGHT CAUSE DELAMINATION. CAUSE			BLADE 5320003	DELAMINATED MAIN ROTOR	05/07/2001 20010531CW001	538
MOONEY M20F ENGINE LOST POWER, THEN QUIT, DURING TAKEOFF CLIMB. AIRCRAFT MADE OFF AIRPORT LANDING. INVESTIGATION FOUND WATER IN THE RIGHT HAND FUEL SUMP. AIRCRAFT HAD BEEN PARKED OUTSIDE THROUGH			FUEL CELL	CONTAMINATED FUEL SYSTEM	05/22/2001 20010604CW012	
MOONEY M20R DURING ANNUAL INSPECTION, PERFORMED ELT INSPECTION IAW FAR 91.207D, AND FOUND THAT ELT DOES NOT TRANSMIT A SIGNAL EVEN THOUGH RED TRANSMIT LIGHT ON UNIT LIGHTS UP. UNIT TESTED USING 3 DIFFERENT ANTENNA SOURCES AND VERIFIED THAT ELT BATTERY IS GOOD. TRANSMIT LIGHT WORKS IN THE ON POSITION AND ARM POSITION WHEN THE G SWITCH IS ACTIVATED BUT STILL NO AUDIBLE SIGNAL HEARD FROM AIRCRAFT RADIOS OR MOONEY	CONT IO550*		TRANSMITTER AK450	FAILED ELT	05/04/2001 20010605CW018	393
WORN M20S DURING ROUTINE OIL CHANGE, FOUND MAGNETIC LATCH FOR ALTERNATE AIR DOOR BOX VERY WORN AND AREA AROUND IT COVERED IN ALUMINUM DUST. THE LATCH HOLDS THE DOOR IN THE CLOSED POSITION UNTIL THE AIR FILTER BECOMES CLOGGED WITH WATER/ICE (WHEN INSUCH CONDITIONS) FORCING THE ALTERNATE AIR DOOR TO OPEN AUTOMATICALLY. WE ROUTINELY FIND THESE LATCHES VERY WORN AND ON THE VERGE OF COMING APART. THIS AIR BOX/LATCH SETUP IS USED ON SEVERAL MODELS, WHICH ALL HAVE THE SAME RECURRING WEARPROBLEM.	03/13/2001 250					LATCH
PIPER PA25235 WING WAS BEING DISASSEMBLED FOR RIB REPLACEMENT. REINFORCEMENT PLATE WAS DRILLED OFF AND CORROSION FOUND ON AFT FACE OF SPAR WEB AND FACE OF REINFORCEMENT PLATE. CAUSE: MOISTURE WICKING BETWEEN PLATES AND LACK OF CORROSION PROTECTION.			600382305	ALT AIR DOOR	20010529CW014	
PIPER PA25235 WING WAS BEING DISASSEMBLED FOR RIB REPLACEMENT. REINFORCEMENT PLATE WAS DRILLED OFF AND CORROSION FOUND ON AFT FACE OF SPAR WEB AND FACE OF REINFORCEMENT PLATE. CAUSE: MOISTURE WICKING BETWEEN PLATES AND LACK OF CORROSION PROTECTION.			SPAR 6405506	CORRODED LT WING	04/12/2001 20010606CW003	
PIPER PA25235 WING WAS BEING DISASSEMBLED FOR RIB REPLACEMENT. REINFORCEMENT PLATE WAS DRILLED OFF AND CORROSION FOUND ON AFT FACE OF SPAR WEB AND FACE OF REINFORCEMENT PLATE. CAUSE: MOISTURE WICKING BETWEEN PLATES AND LACK OF CORROSION PROTECTION.			DOUBLER 6418800	CORRODED LT WING	04/12/2001 20010606CW004	
PIPER PA28140 (CAN) THE CRACK IS CAUSED BY THE ATTACHMENT OF THE SUPPORT ON THE EDGE WITH AN AN3-4A BOLT.	LYC O320E2A		SUPPORT	CRACKED BOLT	04/02/2001 CA010511025	
PIPER PA44180 GOVERNOR WAS SUBMITTED FOR INSPECTION DUE TO AN ENGINE FIRE ON THE GROUND. DURING INSPECTION, THE DRIVE GEAR PN D 4718 WAS FOUND CRACKED IN THE DRIVE GEAR SPLINES THAT ENGAGE THE GOVERNOR DRIVE ON THE ENGINE. THE GEAR CONTAINS TWO CRACKS, ALMOST 180 DEGREES APART AND OVER .5000 INCH LONG. HAD THE ENGINE NOT CAUGHT FIRE, THIS GEAR MOST LIKELY WOULD HAVE FAILED IN SERVICE.		HARTZL	DRIVE GEAR D4718	CRACKED PROP GOVERNOR	04/10/2001 20010531CW002	1034
SKRSKY S58JT TRACK ASSEMBLY ON PILOTS SLIDING WINDOW CAME APART ALLOWING WINDOW TO DEPART THE AIRCRAFT. WINDOW FRAME AND TRACK ASSEMBLY HAD ONLY 65 HOURS TT APPARENT DEFECTIVE TRACK ASSEMBLY.			TRACK S16206510421	DEFECTIVE PILOT WINDOW	04/26/2001 20010604CW005	65
SKRSKY S61N (CAN) ON POST FLIGHT INSPECTION A CRACK WAS FOUND EXTENDING UPWARD FROM BIFILAR ATTACH BOLT HOLE ON MAIN ROTOR HUB UPPER PLATE. MAIN ROTOR HEAD REMOVED FROM SERVICE. ON DISASSEMBLY, SHIM CHECK WAS CARRIED AS PER SB 61B10-46, AND FOUND TO BE WITHIN ACCEPTABLE TOLERANCE. NO NOTABLE CORROSION WAS FOUND IN THE PLATE BOLT. SIKORSKY HAS BEEN NOTIFIED.	GE CT581401	SKRSKY S61102000304	PLATE	CRACKED MAIN ROTOR HEAD	05/01/2001 CA010522016	14100 1508
SNIAS AS350B2 (CAN) DURING ROUTINE DAILY INSPECTION, MAIN ROTOR BLADE WAS FOUND TO HAVE TWO CRACKS ON THE UPPER SKIN AT STA 1177 AND STA 1182, RUNNING IN A CORD WISE DIRECTION. UPON REMOVED OF PART AND FURTHER INSPECTION, IT WAS DETERMINED THAT BLADE WAS NOT REPAIRABLE AS PER EUROCOPTER INSTRUCTION.			BLADE	CRACKED MAIN ROTOR	01/26/2001 CA010518002	2100
SNIAS AS350B2 (CAN) NR 2 FUEL BOOST PUMP WAS FOUND TO BE EXCESSIVELY NOISY DURING POST FLIGHT INSPECTION. PUMP WAS REMOVED FOR REPAIRS THIS NOISE IS A SIGN OF IMPENDING FAILURE. REPLACEMENT PUMP INSTALLED.	TMECA ARRIELID		PUMP	FAILED FUEL BOOST	04/30/2001 CA010518003	216

SNIAS	TMECA	SERVO	LEAKING	11/29/2000	3190
AS350B2	ARRIEL1D		MAIN ROTOR	CA010518004	807
(CAN) ROUTINE DAILY INSPECTION REVEALED EXCESSIVE LEAKAGE FROM MAIN ROTOR SERVO. SERVO REMOVED FOR					
SNIAS	TMECA	ENGINE	FAILED	04/13/2001	6349
AS350BA	ARRIEL1B		NACELLE	CA010515011	1876
(CAN) AIRCRAFT LANDED AND SHUTDOWN. AFTER APPROXIMATELY 10 MIN WHEN ATTEMPTING A RESTART AT APPROXIMATELY 15 PERCENT NGAND T4 -400 DEGREES C A LOUD RINGING NOISE WAS HEARD FROM THE ENGINE COMPARTMENT AND START STALLED - START WAS ABORTED.AFTER SOME TROUBLESHOOTING THE ENGINE WAS REMOVED AND RETURNED TO THE MANUFACTURER FOR FURTHER EVALUATION.					
SNIAS	TMECA	SERVO	LEAKING	10/12/2000	6285
AS350BA	ARRIEL1B		MAIN ROTOR	CA010518005	969
(CAN) SCHEDULED INSPECTION REVEALED EXCESSIVE LEAKAGE FROM MAIN ROTOR SERVO. SERVO REMOVED FOR					
SNIAS	TMECA	SERVO	LEAKING	11/28/2000	6656
AS350BA	ARRIEL1B		MAIN ROTOR	CA010518006	1854
(CAN) DURING ROUTINE DAILY INSPECTION, MAIN ROTOR SERVO WAS FOUND TO BE LEAKING EXCESSIVELY. SERVO WAS REMOVED FOR REPAIR.					
SNIAS	TMECA	SERVO	LEAKING	10/12/2000	1685
AS350BA	ARRIEL1B		MAIN ROTOR	CA010518007	
(CAN) SCHEDULED INSPECTION REVEALED EXCESSIVE LEAKAGE FROM MAIN ROTOR SERVO. SERVO REMOVED FOR					
SNIAS	TMECA	BLADE	CRACKED	11/11/2000	3209
AS350BA	ARRIEL1B		MAIN ROTOR	CA010518008	
(CAN) MAIN ROTOR BLADE WAS REMOVED FROM AIRCRAFT AND SHIPPED TO REPAIR FACILITY FOR DEBONDING REPAIR REQUIRED TO STAINLESS STEEL LEADING EDGE. UPON FURTHER INSPECTION BY THE REPAIR FACILITY, THE BLADE WAS FOUND TO HAVE A SPAR BURNING CRACKLOCATED AT STN 1000, DETERMINED TO BE NOT REPAIRABLE.					
SNIAS	TMECA	PUMP	INTERMITTENT	03/26/2001	
AS350BA	ARRIEL1B		FUEL BOOST	CA010518009	670
(CAN) PILOT NOTED FUEL PRESSURE INTERMITTENT/FLUCTUATING, NORMAL LANDING WAS CARRIED OUT. FUEL PUMP WAS REPLACED TO CORRECT PROBLEM.					
SOCATA	FRNKLN	COLLAR	LOOSE	04/10/2001	
MS894A	6A350C1	21014	PROPELLER	20010604CW003	
PROBLEM REPORTED: PROP WOULD NOT CYCLE W/WARM ENGINE OIL. DISASSEMBLED ENGINE AND FOUND ONE SOCKET HAS SCREW .1562 THAT HOLDS THE TRANSFER COLLAR TOGETHER BROKEN ALLOWING THE COLLAR AND SEALS TO BECOME LOOSE ON CRANKSHAFT OIL TO ESCAPE AND NOT ALL TO THE PROPELLER. NO IMPROPER REPAIR,					

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		OPER. Control No.		8. Comments (Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)	DISTRICT OFFICE	OPERATOR DESIGNATOR
MALFUNCTION OR DEFECT REPORT		ATA Code				
		1. A/C Reg. No. N-				
Enter pertinent data	MANUFACTURER	MODEL/SERIES	SERIAL NUMBER			
2. AIRCRAFT						
3. POWERPLANT						
4. PROPELLER						
5. SPECIFIC PART (of component) CAUSING TROUBLE						
Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.			
6. APPLIANCE/COMPONENT (Assembly that includes part)						
Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number			
Part TT	Part TSO	Part Condition	7. Date Sub.	Optional Information:		
				Check a box below, if this report is related to an aircraft		
				<input type="checkbox"/> Accident; Date _____ <input type="checkbox"/> Incident; Date _____		
				REP. STA.	OPER.	
				MECH.	AIR TAXI	
				MFG.	FAA	
				COMPUTER	OTHER	
				SUBMITTED BY: _____		
				TELEPHONE NUMBER: () _____		

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